

IN THE CLAIMS:

Claims 27 through 29 were previously cancelled. Withdrawn claims 2 through 11 and 17 through 26 are canceled herein. Claims 1, 16, and 30-36 have been amended herein. New claims 38 through 42 have been added. All of the pending claims are presented below. This listing of claims will replace all prior versions and listings of claims in the application. Please enter these claims as amended.

Listing of the Claims:

1. (Withdrawn and currently amended) A nucleic acid sequence encoding the peptide of SEQ ID NO:6 or a part of the peptide of SEQ ID NO:6, wherein said part has the immunogenicity of a 9 kD Mycobacterium avium subspecies paratuberculosis protein-gene as depicted in peptide of SEQ ID NO:6 and further has at least 85% homology with nucleotides 34 through 366 of the nucleotide sequence of SEQ ID NO: 5.

2. through 11. (Canceled).

12. (Withdrawn) A DNA fragment comprising a nucleic acid sequence according to claim 1.

13. (Withdrawn) A recombinant DNA molecule, comprising: a nucleic acid sequence according to claim 1 under the control of a functionally linked promoter.

14. (Withdrawn) A live recombinant carrier, comprising: a nucleic acid sequence according to claim 1.

15. (Withdrawn) A host cell, comprising: a nucleic acid sequence according to claim 1.

16. (Currently amended) A 9 kD Mycobacterium avium subspecies paratuberculosis protein or an immunogenic fragment of said protein, wherein said protein or immunogenic fragment thereof has a sequence homology of at least 90% [[having]] to the amino acid sequence as depicted in SEQ ID NO: 6.

17. through 29. (Canceled).

30. (Currently amended) A ~~vaccine for combating Mycobacterium avium subspecies paratuberculosis infection~~, composition comprising: at least one Mycobacterium avium subspecies paratuberculosis protein according to claim 16 and a pharmaceutically acceptable carrier.

31. (Withdrawn and currently amended) A ~~vaccine for combating Mycobacterium avium subspecies paratuberculosis infection~~, composition comprising: [[a]] the nucleic acid sequence ~~according to~~ of claim 1 and a pharmaceutically acceptable carrier.

32. (Withdrawn and currently amended) A ~~vaccine for combating Mycobacterium avium subspecies paratuberculosis infection, comprising: antibodies against a~~ The protein according to claim 16 ~~and or the immunogenic fragment of said protein, together with~~ a pharmaceutically acceptable carrier.

33. (Currently amended) The ~~vaccine according to~~ composition of claim 30, further comprising an adjuvant.

34. (Currently amended) The ~~vaccine according to~~ composition of claim 30, further comprising an additional antigen [[derived from]] of a cattle pathogen, an antibody against said cattle antigen or genetic information encoding said cattle antigen.

35. (Currently amended) The ~~vaccine according to~~ composition of claim 34, wherein said cattle pathogen is selected from the group consisting of Bovine [[Herpesvirus]] Herpes virus, bovine Viral [[Diarrhoea]] diarrhea virus, Parainfluenza type 3 virus, Bovine Paramyxovirus, Foot and Mouth Disease virus, *Pasteurella haemolytica*, Bovine Respiratory Syncytial Virus, *Theileria* sp., *Babesia* sp., *Trypanosoma* species, *Anaplasma* sp., *Neospora caninum*, *Staphylococcus aureus*, *Streptococcus agalactiae*, *Mycoplasma*, *E. coli*, Enterobacter, Klebsiella, Citrobacter and *Streptococcus dysgalactiae*.

36. (Withdrawn and currently amended) A method for the preparation of a vaccine ~~according to claim 30~~, said method comprising: admixing [[a]] the nucleic acid sequence ~~according to~~ of claim 1 [[and]] together with a pharmaceutically acceptable carrier.

37. (Withdrawn) A diagnostic kit, comprising: suitable detection means and a nucleic acid sequence according to claim 1 or a primer thereof.

38. (New) An isolated peptide having a sequence homology of at least 90% compared with the amino acid sequence of SEQ ID NO: 6.

39. (New) The isolated peptide of claim 28 wherein the isolated peptide comprises the amino acid sequence of SEQ ID NO: 6.

40. (New) The isolated peptide of claim 39 together with a pharmaceutically acceptable carrier.

41. (New) A composition comprising a peptide consisting of the amino acid sequence of SEQ ID NO: 6.

42. (New) The composition of claim 41, further comprising a pharmaceutically acceptable carrier.